

Studying Heart Rate with *Daphnia* Worksheet

Daphnia Sketch

Observations

Variable	Effect on the Heart Rate (Increased, Decreased, No Change)
Control	
Water, 5 °C	
Caffeine solution, 2.5%	
Ethyl Alcohol, 10%	

Post-Lab Questions

1. Explain how the heart rate of *Daphnia* changed between room temperature water and 5 °C water.
2. How do you think warm water would affect *Daphnia*'s heart rate?
3. What other chemicals or variables could be tested to determine their effect on heart rate? *Note:* Use additional text-books or Internet resources.
4. What problems might occur in using *Daphnia* to test the effects of drugs on humans?
- 5a. Examine the data table regarding the effect caffeine and alcohol have on *Daphnia* heart rate. Is this similar or different than the effect of these chemicals on the human heart rate?
- 5b. Based on these results alone, does it suggest that *Daphnia* and humans have the same or different type of heart?